9011A
EA-02-15

DECISION RECORD

for

Travis Tyrrell Seed Orchard Insect Control

Environmental Assessment No. EA-02-15

United States Department of the Interior
Bureau of Land Management
Oregon State Office
Eugene District

BACKGROUND

The Tyrrell Seed Orchard is a centralized tree seed orchard designed to provide genetically improved Douglas-fir seed for BLM's Coos Bay, Roseburg and Eugene districts and for ten private timber and seed companies. Protecting cone crops from insect damage is necessary to meet the seed needs for the BLM and private cooperators. The purpose of the action is to control cone insects which cause damage and seed loss to orchard cone crops. There is a need for control of cone insects in two seed production units (29 acres) in the spring of 2003. Seed extraction from the past three year's cone crops has shown there was substantial seed loss caused by the Douglas-fir cone gall midge (*Contarinia oregonensis*), the Douglas-fir seed chalcid (*Megastigmas spermotrophus*), and Douglas-fir coneworm (*Dioryctria abietivorella*). Indications are that insect populations will maintain or increase.

An Environmental Impact Statement (EIS) covering an Integrated Pest Management Program for the orchard is in progress, but is not expected to be completed until Fall, 2003. This Environmental Assessment (EA) is being prepared for the 2003 spring insect control project. Copies of this decision are posted on the Eugene internet WEB site at: http://www.edo.or.blm.gov/nepa.

DECISION

Based on the analysis contained in the EA, I have decided to implement the spring insect spray proposal with the Proposed Action (Application of Esfenvaletate Insecticide by Aerial (Helicopter) Equipment), herein known as the "selected action".

The following mitigation/conservation measures will be applied to prevent undesirable impacts to the adjacent environment, nearby neighbors, private property, and orchard workers. Some of these measures were determined while consulting with the National Marine Fisheries Service (NOAA Fisheries).

1. Insecticide application will occur in the early morning or late evening when wind, temperature and humidity are optimum for minimizing drift. Spraying will be limited to periods when wind speeds are less than 6 mph, temperature is less than 70°F, and relative humidity is greater than 50 percent. Application will not occur during periods of wind turbulence, when precipitation or fog is occurring or is imminent, during inversions, or when foliage is carrying snow or ice.

2. No adjuvants will be applied other than those identified in the proposed action.

3. Adjacent landowners within 1/4 mile of treatment areas will be notified prior to pesticide application.

4. Chemical storage, chemical mixing, and post-application equipment cleaning will be completed in such a manner as to prevent the potential contamination of any riparian area, perennial or intermittent waterway, unprotected ephemeral waterway, or wetland. Precautions will be taken to assure that equipment used for transport, mixing, and application will not leak pesticides into water or soil. Areas used for mixing insecticide will be located at least 200 feet from streams with water. A spill kit, filled with absorbent materials, will be located near the mixing area in the event of an accidental spill.

5. A 200-foot no-spray buffer will be applied on all hydrologically connected waterways containing water at the time of application (*i.e.*, not just perennial streams).

6. Applications will be timed so as not to coincide with or closely precede large storm events that could result in substantial runoff. Insecticide application will not be conducted when measurable precipitation is expected within four hours after application. If rain precedes the intended application window, orchards will be checked for infiltration rate prior to application.

7. Application will not occur if soils are saturated. Saturation levels will be determined by a soil scientist.

8. Water quality monitoring will be conducted before and after the application.

9. Following insecticide application, sampling will occur after the first over-ground flow of runoff.

10. Runoff monitoring will continue for a minimum of six months following insecticide application.

11. All application operations will be stopped whenever drift has been observed to exceed 49 feet from the treatment area (either visually observed or indicated by drift card hits at 50 feet). Insecticide application will not recommence following a drift-instigated work stoppage until NOAA Fisheries (R. Markle, 503-230-5419) has been notified, and environmental conditions and/or application technique have been sufficiently altered to prevent 50-foot drift.

12. Spray detection cards will be placed 35, 50 and 100 feet from the edge of the treatment units along riparian buffers. This will include the east boundary of the Swisshome/Mapleton, west boundary of the Noti, and the southwest corner of the Noti along stream 54. They will be spaced 100 to 200 ft. apart. They will be stapled at a 45° angle to wooden lathe, with the cards facing the treatment area. Additionally, a few cards will be strategically placed next to stream 8 (both sides). Following application, the drift cards will be reviewed to determine if drift has occurred, the extent of the drift, and the potential for contamination of the adjacent waterbodies.

13. Silt fence catchment barriers will be installed in swales located adjacent to or inside treatment units. The function of these barriers will be to catch organics, sediment, and adsorbed insecticide leaving the treatment area.

14. Soil aeration will be done along unit boundaries downslope from treatment units and above catchment barriers. This will increase infiltration, reduce overland flow, and maximize binding of insecticide by soils.

The following table gives details for each unit for some of the conservation/mitigation measures described above:

Mitigation Measures by Orchard Unit:

Orchard Unit	Boundary/Description	Buffers	Drift Cards	Aeration
Swisshome/Mapleton	West - Private	Not needed; Upslope	Not needed	Not needed

Orchard Unit	Boundary/Description	Buffers	Drift Cards	Aeration
	North - Fallow ground	Not needed; Upslope	Not needed	Not needed
	East - Thick vegetative cover	200 ft. minimum buffer zone from Stream #8 and #16	Yes	Aeration along entire boundary
	South - Road, timber	Not needed	Not needed	Aeration along entire boundary
Noti	West - Thick vegetative cover	200 ft. minimum buffer zone from Stream #8	Yes	Aeration along entire boundary
	North - Fallow ground	Not needed; Upslope	Not needed	Not needed
	East - Private	Not needed; Upslope	Not needed	Not needed
	South - Road, young timber	200 ft. minimum buffer zone from Stream #54	Yes (SW portion)	Aeration along entire boundary

15. Application unit boundaries will be clearly marked with highly visible traffic cones or flagging in a manner that will allow visual identification from the air. Smoke flares will be deployed in each orchard prior to application to provide for pilot/applicator recognition of wind speed and direction.

16. If monitoring by botanists or wildlife biologists indicate that Orchard fields contain a significant herbaceous flowering component prior to insecticide application, they will be mowed to help minimize the presence and exposure of pollinators, such as bees, to the insecticide. This action will allow greater flexibility and minimize the necessity of operating when temperatures are less than 52^{o}F, when insects are not active or are less active.

17. Bird boxes in the proposed spray areas will be removed prior to March 1, 2003.

18. Flight patterns will occur parallel to streams and buffer areas when operationally feasible. Flight patterns will not cross water bodies (ponds, steams, live water).

19. Spray will be released during aerial application at the lowest height consistent with pest control and flight safety.

20. Areas immediately adjacent to buffers will be treated prior to the rest of a unit during aerial application. The helicopter will operate around the buffer areas with the boom closest to the sensitive area turned off to provide maximum spray control.

21. All applicable local, state and Federal laws, including the pesticide labeling instruction of the Environmental Protection Agency, will be strictly followed. Pesticides will be applied with the prescribed environmental conditions stated on the label or within Government guidelines, whichever is more stringent. This would include consideration of relative humidity, wind speed, and air temperature when determining the timing of application relative to drift reduction.

22. A Worker Protection Standard for the use of esfenvalerate will be developed to identify project specific safety procedures.

23. A job hazard analysis (JHA) will be developed to provide a detailed description of orchard jobs and associated risks involved with pesticide use and application. It will identify requirements for personal safety equipment, training, and certification to perform specific tasks.

24. A pesticide safety plan has been developed and identifies project specific safety procedures. In the unlikely event of a spill, the “Accidental Chemical Release” procedures in the pesticide safety plan will be followed. A spill containment kit will be located at each of the mixing sites.

25. Esfenvalerate will be handled and applied by individuals certified in the use of restricted-use pesticides or under the direct supervision of certified applicators. Pesticide applicator licensing and training will be used as a quality control measure.

26. Material Safety Data Sheets will be posted at storage facilities and made available to workers. These provide physical and chemical data, fire and reactivity data, specific health hazard information, spill or leak procedures, instructions for worker hygiene, and special precautions.

27. Appropriate protective clothing will be worn by all workers. At a minimum, the type and amount of protective clothing listed on the pesticide label will be used. For esfenvalerate this will include: Long-sleeved shirt, chemical-resistant gloves, shoes and socks and protective eyewear.

28. Workers who know they are hypersensitive to pesticides will not be assigned to application projects. Workers who display symptoms of hypersensitivity to pesticides during application will be reassigned to other duties.

29. Treated areas will not be entered until the spray has dried unless all the necessary personal protective equipment (PPE) required on the label is worn. Warning signs will be posted to discourage public entry into treated areas.

ALTERNATIVES CONSIDERED

The alternatives considered in detail include the Proposed Action (Application of Esfenvalerate Insecticide by Aerial (Helicopter) Equipment; Alternative A (Application of Esfenvalerate Insecticide by use of Ground-based Equipment), and Alternative B (No Action). A complete description of the alternatives analyzed in detail are contained in the EA (pages 3-5).

REASONS FOR THE DECISION

Considering public comment, the content of the EA, and the management direction contained in the Resource Management Plan, I have decided to implement the selected action as described above. My rationale for this decision follows:

- The selected action provides the best means to address the need as stated in the EA (pages 1-2). Aerial application of esfenvalerate allows for optimum timing of application to closely correspond to gall midge emergence. A significantly shorter application time for aerial verses ground application will help minimize both environmental and human exposure to the insecticide.

- The selected action is consistent with applicable land use plans, policies, and programs (EA page 2).

PUBLIC INVOLVEMENT

The project was described in the Eugene District “Eye to the Future” project update,” distributed in March 2002 to a wide audience of people and organizations.

Copies of the EA and draft FONSI were made available to the public for review and comment between October 9, 2002 and November 9, 2002. Two comments were received. Responses were sent to the two parties and are included as follows:

Comments from John Herbst and Response from BLM:

Question: When applying the insecticide by helicopter, how much of an impact does the helicopter blade have on dispersing the spray beyond the target site?

Turbulence and downwash from helicopter activities cause significant air disruption; however, special application techniques will be used to control the movement of pesticides beyond the intended target site. A typical spray helicopter (turbine-powered Hiller UH-12E) would apply insecticide at a height less than or equal to ½ the width of the rotor. With a 35.3 ft. rotor width, this would equate to a height above the tree canopy of 17.7 ft. or less. By flying within the proper height zone, the insecticide is pushed into the canopy by downward air pressure, thereby reducing the chance of drift.

A typical helicopter insecticide spray boom uses a D8 orifice straight stream nozzle. Flying at a speed of 50 mph with a spray pressure of 28 psi, these nozzles produce a droplet size of 200-300 microns (about the thickness of four sheets of paper), which is recommended for application of insecticides for drift control.

When applying pesticide along riparian boundaries, the pilot would fly with the area of concern to the right of the helicopter and turn off the right-half of the boom, which forces the spray behind and to the left of the ship, away from riparian buffers. This would result in a spray width of about 22 ft. The pilot would fly a series of these single-direction passes along critical area before beginning application in both directions, minimizing the chance of drift. At the end of each flight line, the pilot would turn off the nozzles prior to pulling up to make the turn, eliminating the chance of fanning spray outside of the treatment area. The nozzles would not be turned on to begin the next pass until the boom is horizontal to the treetops. This technique has been used in aerial spray projects at the Bureau of Land Management Horning Seed Orchard and has been successful.

Question: One of the preventative measures used to minimize the spread of a spill is by use of an absorbent material. What is the absorbent material to be used and how effective is it at containing an accidental spill?

We plan to have a Pig® spill kit in a 95-gallon overpack salvage drum available on the mixing site as part of a contingency plan for an accidental spill during mixing. This provides polypropylene mats, pillows (5% polypropylene and 95% flame retardant cellulose), and absorbent socks and dikes (5% cellulose and 95% magnesium aluminosilicate). This kit, which is an industry standard, is designed to confine spills to 61 gallons (the helicopter spray tank typically carries no more than 100 gallons per flight). Additionally, a spill containment pallet with a 61-gallon sump capacity will be slid under the tank during mixing operations. The combination of the catchment sump and spill kit should more than adequately contain any spill that might occur. Also, a bucket is placed under the dry brake on the hose end to capture any liquid residual following tank fill (usually about a teaspoon of liquid).

Question: Can bio-accumulation of the proposed insecticide occur which may be harmful to resident orchard species?

Although some terrestrial insects onsite may be affected by the insecticide applications, and may constitute a portion of the dose to insectivorous species, populations of beneficial insects as a whole are not expected to suffer adverse impacts because the proposed seed orchard applications are localized. Mitigation techniques such as removal of nesting boxes, mowing orchards to remove the flowering component prior to application, and conducting spray operations in early morning, before beneficial insects such as honeybees are active, should help benefit non-target species. The Risk Assessment of Pesticides and Fertilizers Proposed for use at Travis Tyrrell Seed Orchard (2002), a recently completed document that analyzes human and biological risk for an environmental assessment currently being written for the orchard, shows the esfenvalerate risk to terrestrial and aquatic species to be below the acceptable threshold for programmed use over time. Given that the proposed action in this EA is a single application, the risk of bioaccumulation should be minimal.

Question: Use of pheromone kill traps seems like a great alternative to spraying. How much more development is needed until this type of insect control can be used in the future?

Research conducted by Simon Fraser University in British Columbia and the British Columbia Ministry of Forests for use of pheromones to monitor and control Douglas-fir gall midge has been done with the support of many of the seed orchards in the Pacific Northwest. The research results so far indicate that the pheromone traps have promise as a monitoring technique to help determine potential damage to Douglas-fir cones. However, using the pheromone traps for attract and kill, a control measure being tested, has not yet been successful. Additional work is needed to determine whether this can become a viable operational treatment method.

Comments from Jan Wroncy and Response from BLM:

Comment: Need for an Environmental Impact Statement: Pursuant to the National Environmental Policy Act (NEPA), an Environmental Impact Statement is required for this action. In fact, one is supposed to be prepared in the year 2003. A scoping letter was sent out on this proposed EIS for Integrated Pest Management for the Tyrrell Seed Orchard (and 3 other orchards) on July 1, 2002, and I responded to that request for comments on July 26, 2002

An Environmental Impact Statement (EIS) is currently being written to address a future, comprehensive Integrated Pest Management (IPM) program for the Tyrrell Seed Orchard. However, the earliest this document is expected to be completed is the fall of 2003, making it necessary to address the immediate issue of cone insect control for the spring of 2003 in this separate environmental analysis (EA). We believe this EA analysis demonstrates that the proposed action would have no significant impact and therefore no EIS is required.

Comment: Within those scoping comments I included Washington Toxics v. Environmental Protection Agency recent ruling in United States District Court, Western District of Washington at Seattle, Case No. C01-132C, July 3, 2002, and Headwaters v. Talent Irrigation District opinion by the Ninth Circuit Court of Appeals dated March 12, 2001. Both cases have relevance here.

In your comments, it was unclear how you felt these two cases are specifically relevant to this project. The Washington Toxics v. Environmental Protection Agency (EPA) decision addresses the EPA and requires the EPA to consult with the National Marine Fisheries Service (NOAA Fisheries) on the impacts of pesticide labeling; and to review its programs to determine how to use EPA pesticide and water quality authorities to conserve salmon and steelhead. This case is directed at the EPA since they are responsible for establishing regulations associated with pesticide use and labeling.

The Headwaters v. Talent Irrigation District decision determined that direct application of a pesticide to waters of the United States (in this case, using a herbicide to control plant growth in irrigation ditches) in accordance with the pesticide's label does not obviate the need for the applicator to obtain a NPDES permit. Asana XL (esfenvalerate) is not labeled for use directly over water or in areas where surface water is present and the proposed project will have a minimum of 200 feet buffers between the application areas and streams. Direct application of pesticide into waters of the United States is not part of the proposed project.

Comment: A recent decision in the Ninth Circuit Court of Appeals has relevance to this EA for the Tyrrell Seed Orchard regarding both the need for a new Environmental Impact Statement (in fact there was never an EIS issued by the Bureau of Land Management covering this Integrated Management Plan for the use of insecticides); and the potential need for a National Pollution Discharge Elimination System (NPDES) permit for the use of esfenvalerate, either by ground or air near water; and for the need for at least one mile buffer from any protected resource such as any body of water, including the streams, swales, ponds, and the Siuslaw River, the coho salmon and the salmon habit.

The Ninth Circuit Decision (League of Wilderness Defenders v. Forsgren) determined that the Forest Service interpretation of the silvicultural point source definition was incorrect and that the Forest Service should acquire a NPDES permit when making aerial application of pesticide directly over navigable waters. The second element of

the decision determined that the Forest Service did not adequately address the effects of drift outside of the spray area.

With respect to the BLM project, at no time will the helicopter be spraying directly over streams. The minimum buffer distance between the application areas and streams is 200 feet. In addition, to further insure that there would be no reasonable likelihood of unintentional direct application into streams, the proposed project includes other measures such as restrictions on flight patterns and limitations on the weather conditions in which the applications may take place. We believe there is reasonable certainty that esfenvalerate will not directly enter a stream via a point source, and no information has been presented in your comments or from any other source that would lead us to a different conclusion. Therefore, we do not believe that an NPDES permit is needed. There is a very small risk of indirect entry from runoff. However, this entry process is in the nature of a dispersed source of pollution which is governed by the non-point source program rather than the permit process. The BLM is following best management practices under that program and is including in this project such mitigation measures as the construction of sediment traps to reduce the risk of pollution from runoff.

The BLM has addressed risk to non-target areas and species. A risk assessment was developed for pesticide application at the Tyrrell Seed Orchard. This assessment addresses application methods, environmental fate, runoff and leaching, and off target drift; human health hazard, exposure, and risk characterization; and non-target species problem formulation, analysis, and risk characterization. This risk assessment was used extensively to address the effects of drift, runoff, and effects to non-target species. This risk assessment was also used, in addition to consultation with National Marine Fisheries Service (NOAA Fisheries), to determine buffer distances necessary to eliminate any reasonable likelihood that the pesticides would affect specific fish species by entering streams via drift or runoff.

Comment: BLM needs to develop non-chemical alternatives, and needs to do a thorough assessment of alternatives, rather than a risk assessment for the potential impact of an insecticide.

The Tyrrell Seed Orchard has considered all feasible, non-chemical methods of cone insect control. Manual treatments to reduce insect damage have been done the past three years. This has included removal of all visible cones during cone harvest in August and removal of conelets in younger orchards in May. This manual effort, referred to as sanitation, helps remove insects and insect habitat from the orchard trees. While the results of this control method have been hard to quantify, sanitation will continue to be practiced on all seed production units until a comprehensive integrated pest management program is in place. In spite of this effort, seed extraction completed in 1999, 2000, and 2001 showed a considerable reduction in yield due to insect problems.

Research conducted by Simon Fraser University in British Columbia and the British Columbia Ministry of Forests for use of pheromones to monitor and control Douglas-fir gall midge has been done with the support of many of the seed orchards in the Pacific Northwest. The research results so far indicate that the pheromone traps have promise as a monitoring technique to help determine potential damage to Douglas-fir cones. However, using the pheromone traps for attract and kill, a control measure being tested, has not yet been successful. Additional work is needed to determine whether this can become a feasible, operational treatment method.

The Missoula Research and Technology Center (USFS) is still modifying a prototype vacuum designed to collect over-wintering insect larvae from the base of orchard trees. Several versions have been tested over the past few years, but it has not yet been determined whether this will become a feasible treatment method.

Insecticidal soaps are being considered for control of certain orchard pests; however, they do not appear to be a viable option for the Douglas-fir gall midge. As new non-chemical products and techniques are developed, they will be considered for use at the seed orchard.

Comment: BLM needs to give more consideration of Rural Interface – better protection of neighbors, the public, adjacent lands, aquatic organism including anadromous fish, all wildlife, and the naturally occurring predator species which normally keep cone insects in balance.

The scoping process used for NEPA is designed to give the public an opportunity to comment on a project, either positively or negatively, providing a sounding board for questions and concerns. Documented discussions, from public open houses, door-to-door conversations, and written correspondence, with our immediate and local

neighbors about spraying has resulted in either positive or neutral response to the project. Concerns such as notification prior to spraying and providing adequate buffers have been addressed in the document. Wildlife issues involving bird boxes (which would be removed prior to spraying) and honeybees (the floral component would be mowed in proposed orchards prior to application) have been addressed in the EA. Aquatic issues were addressed in the EA and in much greater detail in the Biological Assessment (BA). The BA was reviewed by the National Marine Fisheries Service (NOAA Fisheries), and they have given the BLM a Biological Opinion (BO) to allow the spray project to proceed.

Comment: BLM needs to provide more NEPA documentation regarding this issue, and it needs to be addressed in an EIS before and EA can be tiered to it.

We believe this EA adequately addresses this proposed spray project. This EA is not and does not need to be tiered to the future Integrated Pest Management EIS.

Question: If the Forest Service determined that they needed a ONE Mile buffer while spraying insecticides by aerial means, why should the BLM need any less buffer?

The BLM has determined that a 200-foot buffer is adequate to protect the aquatic resource. More information on buffers is included below in the response to the concern about aerial drift.

Question: How will BLM prevent drift of insecticide when the helicopter vortex will spread the droplets far and wide?

Turbulence and downwash from helicopter activities can cause significant air disruption; however, special application techniques will be used to control the movement of pesticides beyond the intended target site. A typical spray helicopter (turbine-powered Hiller UH-12E) would apply insecticide at a height less than or equal to ½ the width of the rotor. With a 35.3 ft. rotor width, this would equate to a height above the tree canopy of 17.7 ft. or less. By flying within the proper height zone, the insecticide is pushed into the canopy by downward air pressure, thereby reducing the chance of drift.

A typical helicopter insecticide spray boom uses a D8 orifice straight stream nozzle. Flying at a speed of 50 mph with a spray pressure of 28 psi, these nozzles produce a droplet size of 200-300 microns (about the thickness of four sheets of paper), which is recommended for application of insecticides for drift control. When applying pesticide along riparian boundaries, the pilot would fly with the area of concern to the right of the helicopter and turn off the right-half of the boom, which forces the spray behind and to the left of the ship, away from riparian buffers. This would result in a spray width of about 22 ft. The pilot would fly a series of these single-direction passes along critical areas before beginning application in both directions, minimizing the chance of drift. At the end of each flight line, the pilot would turn off the nozzles prior to pulling up to make the turn, eliminating the chance of fanning spray outside of the treatment area. The nozzles would not be turned on to begin the next pass until the boom is horizontal to the treetops. This technique has been used in aerial spray projects at the Bureau of Land Management Horning Seed Orchard and has been successful.

Question: How has the BLM addressed the non-lethal effects of the use of esfenvalerate on the coho, and Chinook salmon in the headwaters of the Siuslaw River within and next to the Tyrrell Seed Orchard?

Sublethal affects on Coho salmon from this application are expected to be well below even the most sensitive levels found. Moore and Waring (2001) studied the sublethal effects of a pyrethroid on salmon and found that male parr exhibited an inhibited olfactory response to concentrations of less than 4 parts per trillion. The Q value derived from modeling the aerial application was 4.24E-004. The expected concentration in the water is therefore 0.000000037 mg/l or 0.037 parts per trillion. This is 27 times lower than the 4 parts per trillion threshold mentioned above.

Questions: What happens when the insecticide reduces a food source for the salmon? What happens when dying insects land, or are blown into the water where the salmon and other fish can ingest them?

The reduction in potential food for salmon caused by spraying esfenvalerate on 29 acres will be infinitely small compared to the food source available from adjacent unsprayed areas in the watershed. Although some terrestrial insects onsite may be affected by the insecticide applications, and may constitute a portion of the dose to

insectivorous species, populations of beneficial insects as a whole are not expected to suffer adverse impacts because the proposed seed orchard applications are localized.

The risk that some treated insects would reach the water is very low since most insects would be killed immediately upon contact and would be intercepted by organic material before reaching live water.

Comment: Aerial drift is extremely likely. The EA proposes application with wind speeds between 3 to 5 miles per hour. The 200-foot buffer will be violated in 23 seconds with a 6 mile an hour wind speed, and with 44 seconds with a 3 mile an hour wind speed.

It is unclear what the parameters are for the calculations in your comment (air speed, droplet size, weather conditions, spray pressure, etc.). Weather and application guidelines proposed for helicopter spraying are clearly stated in the EA and BA. Spraying would probably be completed in the early morning, when winds are minimal and temperatures are low. The droplet size of 200-300 microns is being used to help prevent drift (a 20 micron droplet will travel about 1000 feet in a 3 mph wind before falling 10 feet, verses 8 feet for one that is 400 microns). Similar projects completed over the past few years at the Horning Seed Orchard, Salem District BLM, demonstrated that such a pesticide application could be successfully performed with a minimal amount of drift. The Salem project did not have drift that extended more than 60 feet from monitored treatment edges. The buffers in the proposed treatment areas at Tyrrell are at least 200 feet from live water, providing a drift buffer that should be more than adequate to protect the aquatic resource.

Comment: Many issues of secret ingredients, and toxicology of esfenvalerate are not adequately addressed by the EA or the Risk Assessment.

We believe the EA and Risk Assessment have adequately addressed the toxicology of esfenvalerate and inert ingredients. The proposed spray project would follow all guidelines on the esfenvalerate label.

Question: How will BLM prevent the swallows and other insect-eating birds, or the tree frogs, or other predators of cone insects from being present in the orchard during the aerial application of this deadly insecticide, or shortly thereafter while the poison is still very biochemically active? How does the BLM measure the loss of one swallow which, no doubt has just migrated a very long way to this location, only to be poisoned, or starved to death? The BLM has put a dollar amount of $196,000 on the potential loss of seed from the orchard, which the BLM assigns to cone insects, but does not discuss any of the losses to the environment or assign a dollar value to that loss.

The Risk Assessment for aerial application of esfenvalerate shows that the risk quotient for modeled terrestrial species (including those that are listed as endangered, threatened, or sensitive) is below the level of concern for acute exposures. The modeling was done for both a typical (88 acres) and maximum (142 acres) application scenario. Because the proposed application is considerably less acres than that under either of the modeled scenarios, risk is expected to be even less. As a preventative measure, bird nesting-boxes would be removed from the proposed spray areas in the winter prior to application. Therefore, fewer birds would be present during the proposed application. Terrestrial species within the orchard would also tend to move away from the sound of activity caused by people, helicopters, and vehicular traffic.

No attempt was made to quantify environmental loss; however, consideration was given to selecting a viable insecticide that would perform the task with the least environmental risk. Dimethoate, analyzed for use in the proposed 2001 spray project at Tyrrell, was dismissed from consideration for this project because the risk quotient was above the level of concern for several species under a typical application scenario. Although a monetary value for seed loss is projected, the true loss is that the amount of quality seed needed to reforest federal and private timberland would not be available due to insects.

Comment: This EA for the Tyrrell Seed Orchard insecticide use is almost identical to the EA issued last year. Both appear to be tiered to the Lorane Seed Orchard EA, which I believe was signed in 1983. There is no mention of insecticide use, that I could find, and certainly no detailed analysis of insecticide use and potential environmental impacts as required by NEPA. The Resource Management plan for the Eugene District also gives on detailed analysis of environmental impacts for insecticide use as required by NEPA. That apparently was the reason that the BLM was requesting scoping comments for a EIS for the Integrated Pest Management for the Tyrrell And other orchards. Therefore, at present the BLM is tiering to very old, and/or inadequate NEPA documents. Or it is tiering forward to the EIS that has not been issued or gone through public review. Either way, BLM has not complied with the National Environmental Policy Act, and therefore must wait until a valid EIS has been developed and reviewed before BLM can employ insecticides in the management of the Tyrrell Seed Orchard.

The EA states "The Proposed Action and alternatives are also in conformance with the Lorane Seed Orchard Development Project (EA-OR090-3-35)(USDI Bureau of Land Management. 1983), which directs the development and management of the Orchard and states that insecticides may be applied during the cone production stages (Lorane Seed Orchard Development Project EA, p. 12)." A detailed analysis of this proposed insecticide spray application has been done in the current EA (EA-02-15).

The current EA is tiered to the Lorane Seed Orchard EA and the Eugene District Resource Management EIS. This EA is not and does not need to be tiered to the future Integrated Pest Management EIS.

The interdisciplinary team did not identify any additional significant or major issues from public input that led to the development of an additional action alternative or revision of the EA.

CONSULTATION

Consultation has been completed with the National Marine Fisheries Service (NOAA Fisheries). In a Biological Opinion prepared by the NOAA Fisheries pursuant to section 7 of the Endangered Species Act, NOAA Fisheries concluded that the selected action was not likely to jeopardize Oregon Coast coho salmon. NOAA Fisheries has provided specific conservation measures (included in mitigation/conservation measures) and other terms and conditions that will be applied as follows:

- Implement all conservation measures described in the *Proposed Action* section of this Opinion, or gain prior authorization from NOAA Fisheries to forgo implementation of any measure.
- Review the provisions of this Opinion with the contracted applicator prior to commencing insecticide application operations.
- Review Tyrrell Orchard's spill response plan with the contracted applicator prior to commencing insecticide application operations.
- Notify NOAA Fisheries (R. Markle, 503-230-5419) one week prior to commencing the initial insecticide application, when feasible.
- Allow NOAA Fisheries staff to be present, at its discretion, during any insecticide application operation.
- Monitor the boundaries of the designated incidental take areas by implementing those pertinent actions detailed in the Effectiveness Monitoring section of the Water Quality Monitoring Plan.
- Implement the Water Quality Monitoring Plan as presented to NOAA Fisheries during consultation.
- Notify NOAA Fisheries (R. Markle, 503-230-5419) of any significant deviation from the Water Quality Monitoring Plan.
- Following the completion of insecticide application and monitoring, provide NOAA Fisheries with a summary report by **December 31, 2003**, describing the success of conservation measures required under Reasonable and Prudent Measure #1, and the results of monitoring under Reasonable and Prudent Measures #2 and #3(a).
- If a dead, sick or injured coho salmon is located, immediately notify Rob Markle, NOAA Fisheries, telephone: (503-230-5419), or NOAA Fisheries Law Enforcement (360-418-4246). Care will be taken in handling sick or injured specimens to ensure effective treatment and care or the handling of dead specimens to preserve biological material in the best possible state for later analysis of cause of death. In conjunction with the care of sick or injured species or preservation of biological material from a dead animal, the finder has the responsibility to carry out instruction provided by Law Enforcement to ensure that evidence intrinsic to the specimen is not unnecessarily disturbed.

PROTEST PROVISIONS

This forest management decision may be protested under 43 CFR 5003 - Administrative Remedies. In accordance with 43 CFR 5003.2, the decision for this project will not be subject to protest until the notice of decision is published in the Eugene Register-Guard on December 26, 2002. This published notice of decision will constitute the decision document for the purpose of protests of this project. 43 CFR 5003.2(b). Protests of the decision must be filed with this office within 15 days after publication of the notice of decision.

IMPLEMENTATION DATE

If no protest is received by the close of business (4:15 P.M. Pacific Standard Time) on January 10, 2003, this decision will become final. If a timely protest is received, this decision will be reconsidered in light of the protest and other pertinent information available in accordance with 43 CFR 5003.3.

Approved by: Julia Dougan — 12/20/02

Eugene District Manager — Date

9011A
EA-02-15

FINDING OF NO SIGNIFICANT IMPACT

for

Travis Tyrrell Seed Orchard Insect Control

Environmental Assessment No. EA-02-15

United States Department of the Interior
Bureau of Land Management
Oregon State Office
Eugene District

The Eugene District of the Bureau of Land Management (BLM) has analyzed a proposal for insect control at the Travis Tyrrell Seed Orchard in an environmental assessment (EA OR090-02-15). The Tyrrell Seed Orchard is a centralized tree seed orchard designed to provide genetically improved Douglas-fir seed for BLM's Coos Bay, Roseburg and Eugene districts and for ten private timber and seed companies. Protecting cone crops from insect damage is necessary in order to meet the seed needs for the BLM and private cooperators. The purpose of the action is to control cone insects which cause damage and seed loss to orchard cone crops. There is a need for control of cone insects in two seed production units (29 acres) in the spring of 2003. The EA considered a Proposed Action (Application of Esfenvalerate Insecticide by Aerial (Helicopter) Equipment), Alternative A (Application of Esfenvalerate Insecticide by use of Ground-Based Equipment), and the No Action Alternative.

A summary of the environmental effects (as discussed in the EA) follows:

- The Proposed Action would have no significant impacts on the social and economic environment in the region or the locality (EA, pp. 8-9).

- The EA analysis concludes that the application and mitigation measures would insure that the Proposed Action would have a negligible effect on public health and safety (EA, pp. 6, 9-11). The recently completed Risk Assessment of Pesticides and Fertilizers Proposed for use at Travis Tyrrell Seed Orchard (2002) analyzed the risks to human health and non-target species from using pesticides and fertilizers. Esfenvalerate was shown to have negligible risk when used according to guidelines in the Proposed Action.

- There are no unique characteristics, such as prime or unique farmlands or wild and scenic rivers within the project area (EA, p. 8).

- Impacts on the quality of the human environment would not be highly controversial. Two comments, involving environmental and human health issues, were received during the public review period for the EA and draft FONSI. While one comment letter expressed differences of opinion about the analysis and opposition to the Proposed Action, it did not establish controversy about the nature of the impacts. Responses were sent to the two parties and are available for review in the Decision

Record and the Project Analysis File (located at Tyrrell Seed Orchard).

- There are no highly uncertain, unique, or unknown risks involved. Analysis completed in the Risk Assessment showed that the esfenvalerate hazard to humans and the environment was negligible when used according to proposed guidelines.

- The Proposed Action would involve application only in 2003 and would not establish any precedent for future action (EA, p. 3-4).

- The EA analysis considered cumulative impacts and did not identify any that might be significant (EA, pp. 10-11, 13-15, 17-21, 23-25, 29- 30, 32-33).

- There are no known cultural resources within the project area (EA, p. 8).

- In a Biological Opinion prepared by the National Marine Fisheries Service (NOAA Fisheries) pursuant to section 7 of the Endangered Species Act, NOAA Fisheries concluded that the Proposed Action is not likely to jeopardize Oregon Coast coho salmon. The Decision Record will implement conservation measures and non-discretionary terms and conditions that NOAA Fisheries has provided. The EA analysis concluded that the Proposed Action would have no effect on any other threatened or endangered species (EA, pp. 29-30, 32-33).

- This action has no adverse energy impact, as outlined in the President's National Energy Policy (Executive Order 13212).

- The Proposed Action would not violate Federal, State, and local law requirements imposed for protection of the environment.

Determination:

On the basis of the information contained in the EA, and all other information available to me, it is my determination that implementation of the Proposed Action would not have significant environmental impacts not already addressed in the *Eugene District Proposed Resource Management Plan/Environmental Impact Statement (November 1994), and the Eugene District Record of Decision and Resource Management Plan* (June 1995), with which this EA is in conformance, and does not, in and of itself, constitute a major federal action having a significant effect on the human environment. Therefore, an EIS or a supplement to the existing EIS is not necessary and will not be prepared.

Approved by: Julia Dougan 12/20/02
Eugene District Manager Date